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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,520	08/05/2002	Stephen Paul Hunter	112436	9272
7590	03/25/2004		EXAMINER	
Oliff & Berridge P O Box 19928 Alexandria, VA 22320		HANSEN, COLBY M		
		ART UNIT		PAPER NUMBER
		3682		

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/089,520	HUNTER ET AL.	
	Examiner Colby Hansen	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 August 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Great Britain on 8/5/2000. It is noted, however, that applicant has not filed a photocopy of the British application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Applicant refers to GB0019199.9 on page 5, line 8 without a listing it on the PTO-1449, or giving a photocopy.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "rolling contact" claimed in claim 10, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities: applicant must amend the specification to include the aforementioned section headings, where applicable.

Appropriate correction is required.

Claim Objections

Claims 1-17 are objected to because of the following informalities: in claims 1 and 3, the term "characterised" must be changed to --characterized--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 7, 10, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the female and the male parts" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Regarding claim 7, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 17, it is unclear which bearing arrangement applicant is intending to modify.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 3682

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, and 8-12 rejected under 35 U.S.C. 102(b) as being anticipated by Nagata et al. (US Pat. 5,486,054).

Nagata et al. (US Pat. 5,486,054) a bearing arrangement comprising: two bearing assemblies (fig. 1) both located on the same axis; each bearing assembly comprising two parts in contact during their relative rotation; at each assembly the contact taking place in a respective plane; characterized in that one of the assemblies allows resilient displacement of its contact plane and the other of the assemblies is relatively rigid for preventing substantial displacement of its contact plane; the displacement of the contact plane is allowed to take place only in a direction substantially parallel to the axis; wherein the two parts of each of the bearing assemblies include a female part 9,12,13,16, 25,26 having a recess or aperture and a male part 14, 24 acceptable into the recess or aperture; wherein at least one of the two parts is formed of a plastics material 9,12; wherein the plastics material is formed as an insert within an outer collar; wherein the contact is rolling contact and the parts include a ball race; wherein the resilient displacement of the plane is provided by a resiliently movable female part; wherein the female part includes a planar spring support 15; and wherein the contact is between the female and the male parts of the bearing assembly or assemblies and is at discrete locations in the plane.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagata et al. (US Pat. 5,486,054) in view of Koyama et al. (US Pat. 6,406,191).

Nagata et al. (US Pat. 5,486,054) discloses the claimed invention except for the two assemblies being in sliding contact with a non-circular female recess with a circular male or a non-circular male part with a circular recess (fig. 3).

Koyama et al.(US Pat. 6,406,191) a bearing assembly having a male part and a female part in sliding contact. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the bearing arrangement of Koyama et al.(US Pat. 6,406,191) in Nagata et al. (US Pat. 5,486,054) so as allow for miniaturizing of the bearing assembly as well self-centering characteristics that create a more robust design. Furthermore, although, Koyama et al. (US Pat. 6,406,191) does not disclose a circular/non-circular respect relationship, such configuration are deemed to be a matter of obvious design choice as applicant has not referred to any mechanical merits of the configuration within the specification, and such characteristics would have been obvious to one having ordinary skill in the art at the time the invention was made to make such modification to aide in manufacturing or to conform to surrounding in which the bearing assembly is to be utilized.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3682

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over German Patent (DE 4315161 A1) in view of Nagata et al. (US Pat. 5,486,054).

German Patent (DE 4315161 A1) discloses a measurement probe comprising an articulatable wrist providing two axes of rotation for the probe, at a first axis there being provided a bearing arrangement, the bearing arrangement being connected to a spindle having an extension extending beyond the bearing arrangement in the direction of the first axis; wherein the extension is connected to a further bearing arrangement providing a second axis of rotation for the probe (fig. 4), transverse to the first axis; wherein power and signal paths are provided and at least one of the paths crosses a rotary coupling disposed about the first axis (said power and signal paths are inherent as there are no external wires).

However German Patent (DE 4315161 A1) does not disclose a bearing arrangement comprising: two bearing assemblies both located on the same axis; each bearing assembly comprising two parts in contact during their relative rotation (etc. as claimed in claim 1).

Nagata et al. (US Pat. 5,486,054) discloses the bearing arrangement. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the bearing arrangement of Nagata et al. (US Pat. 5,486,054) within German Patent (DE 4315161 A1) so as improve the operational accuracy of the rotational mechanism for which the bearing arrangement serves, as suggested by Nagata et al. (US Pat. 5,486,054).

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 305-3597**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on _____

(Date)

Typed or printed name of person signing this certificate:

Art Unit: 3682

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Conclusion

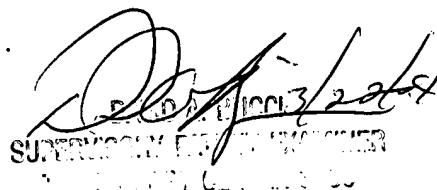
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (703) 305-1036. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen

Patent Examiner

 3-22-04


COLBY M. HANSEN
SUPERVISORY EXAMINER
ART UNIT 3682
MAILED 3-22-04